

 ***Vertex Standard***

DIGITAL TWO-WAY RADIO SYSTEM

**VXD-720**

**OPERATING MANUAL**





## DECLARATION OF CONFORMITY

This declaration is applicable to your radio only if your radio is labeled with the FCC logo shown below.

### DECLARATION OF CONFORMITY

Per FCC CFR 47 Part 2 Section 2.1077(a)



Name: Vertex Standard LMR, Inc.

Address: US Headquarters: 10900 Walker Street, Cypress, CA 90630 U.S.A.

Phone Number: 1-800-283-7839

Hereby declares that the product:

Model Name: **VXD-720**

conforms to the following regulations:

FCC Part 15, subpart B, section 15.107(a), 15.107(d) and section 15.109(a)

#### **Class B Digital Device**

As a personal computer peripheral, this device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



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**Caution**

**BEFORE USING THIS RADIO, READ THIS CHAPTER WHICH CONTAINS IMPORTANT OPERATING INSTRUCTIONS FOR SAFE USAGE AND RF ENERGY AWARENESS AND CONTROL INFORMATION AND OPERATIONAL INSTRUCTIONS FOR COMPLIANCE WITH RF ENERGY EXPOSURE LIMITS IN APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS.**

**ALSO READ THE OPERATIONAL INSTRUCTIONS FOR SAFE USAGE. FOR RADIOS THAT HAVE BEEN APPROVED AS INTRINSICALLY SAFE, READ THE INSTRUCTIONS AND INFORMATION ON INTRINSIC SAFETY ON PAGE 10 OF THIS BOOKLET.**

**RF Energy Exposure Awareness and Control Information and Operational Instructions for Occupational Use**

**NOTICE: This radio is intended for use in occupational/controlled conditions where users have full knowledge of their exposure and can exercise control over their exposure to meet the occupational limits in FCC and International standards. This radio device is NOT authorized for general population consumer use.**

This two-way radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. It uses radio frequency (RF) energy or radio waves to send and receive calls. RF energy is one form of electromagnetic energy. Other forms include, but are not limited to, sunlight and x-rays. RF energy, however, should not be confused with these other forms of electromagnetic energy, which when used improperly, can cause biological damage. Very high levels of x-rays, for example, can damage tissues and genetic material.

Experts in science, engineering, medicine, health, and industry work with organizations to develop standards for safe exposure to RF energy. These standards provide recommended levels of RF exposure for both workers and the general public. These recommended RF exposure levels include substantial margins of protection.

All Vertex Standard two-way radios are designed, manufactured, and tested to ensure they meet government-established RF exposure levels. In addition, manufacturers also recommend specific operating instructions to users of two-way radios. These instructions are important because they inform users about RF energy exposure and provide simple procedures on how to control it.

Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits:

<http://www.fcc.gov/oet/rfsafety/rf-faqs.html>

<http://www.osha.gov/SLTC/radiofrequencyradiation/index.html>

### **Federal Communication Commission (FCC) Regulations**

The FCC rules require manufacturers to comply with the FCC RF energy exposure limits for portable two-way radios before they can be marketed in the U.S. When two-way radios are used as a consequence of employment, the FCC requires users to be fully aware of and able to control their exposure to meet occupational requirements. Exposure awareness can be facilitated by the use of a product label directing users to specific user awareness information. Your Vertex Standard two-way radio has a RF Exposure Product Label. Also, your Vertex Standard manual, or separate safety booklet includes information and operating instructions required to control your RF exposure and to satisfy compliance requirements.

### ***Compliance with RF Exposure Standards***

Your Vertex Standard two-way radio is designed and tested to comply with a number of national and International standards and guidelines (listed below) for human exposure to radio frequency electromagnetic energy. **This radio complies with the IEEE (FCC) and ICNIRP exposure limits for occupational/controlled RF exposure environments at operating duty factors of up to 50% talk-50% listen and is authorized by the FCC for occupational use only.** In terms of measuring RF energy for compliance with these exposure guidelines, **your radio generates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.**

**NOTE:** The approved batteries, supplied with this radio, are rated for a 5-5-90 duty factor (5% talk-5% listen-90% standby) even though this radio complies with FCC occupational exposure limits and may operate at duty factors of up to 50% talk.

**Your Vertex Standard two-way radio complies with the following RF energy exposure standards and guidelines:**

- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95 1-1999 Edition
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard, 2003
- ANATEL ANNEX to Resolution No. 303 of July2, 2002 “Regulation of limitation of exposure to electrical, magnetic and electromagnetic fields in the radio frequency range between 9 kHz and 300 GHz” and “Attachment to resolution #303 from July2, 2002”

**RF Exposure Compliance and Control Guidelines and Operating Instructions**

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits, always adhere to the following procedures.

***Guidelines:***

- Do not remove the RF Exposure Label from the device
- User awareness instructions should accompany device when transferred to other users
- Do not use this device if the operational requirements described herein are not met.

***Operating Instructions***

- Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button. To receive calls, release the PTT button. Transmitting 50% of the time, or less, is important because this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).
- Hold the radio in a vertical position in front of the face with the microphone (and other parts of the radio including the antenna) at least one inch (2.5 centimeters) away from the nose or lips. Antenna should be kept away from the eye. Keeping the radio at a proper distance is important since RF exposures decrease with increasing distance from the antenna.
- When worn on the body, always place the radio in a Vertex Standard-approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of non- Vertex Standard-approved accessories may result in exposure levels, which exceed the FCC occupational/controlled environment RF exposure limits.
- If you are not using a body-worn accessory and are not using the radio in the intended-use position in front of the face, ensure the antenna and the radio are kept at least one inch (2.5 centimeters) from the body when transmitting. Keeping the radio at a proper distance is important because RF exposures decrease with increasing distance from the antenna.

***Approved Accessories***

- Use only Vertex Standard -approved supplied or replacement antennas, batteries, and accessories. Use of Non- Vertex Standard approved antennas, batteries, and accessories may exceed the FCC (1EEE) and ICNIRP RF exposure guidelines.
- For a list of Vertex Standard-approved accessories, visit the following website, which lists approved accessories for your radio model:  
<http://www.vertexstandard.com/lmr>

**Electromagnetic Interference/Compatibility**

**NOTE:** Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

**Facilities**

To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any facility where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

**Aircraft**

When instructed to do so, turn off your radio when on board an aircraft. Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

**Medical Devices**

***Pacemakers***

The Advanced Medical Technology Association (AdvaMed) recommends that a minimum separation of 6 inches (15 centimeters) be maintained between a handheld wireless radio and a pacemaker. These recommendations are consistent with those of the U.S. Food and Drug Administration.

**Persons with pacemakers should:**

- ALWAYS keep the radio more than 6 inches (15 centimeters) from their pacemaker when the radio is turned ON.
- Not carry the radio in the breast pocket.
- Use the ear opposite the pacemaker to minimize the potential for interference.
- Turn the radio OFF immediately if there is any reason to suspect that interference is taking place.

***Hearing Aids***

Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

***Other Medical Devices***

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

**Use of Communication Devices While Driving**

Always check the laws and regulations on the use of radios in the areas where you drive.

- Give full attention to driving and to the road.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call, if driving conditions or regulations so require.

**Operational Warnings**



**WARNING**

**For Vehicle With Air Bags:**

Refer to vehicle manufacturer's manual prior to installation of electronic equipment to avoid interference with air bag wiring.

Do not place a portable radio in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a portable radio is placed in the air bag deployment area and the air bag inflates, the radio may be propelled with great force and cause serious injury to occupants of the vehicle.

**Potentially Explosive Atmospheres**

(Explosive atmospheres refers to hazard classified locations that may contain hazardous gas, vapors, or dusts.)

Turn off your radio prior to entering any area with a potentially explosive atmosphere unless it is a portable radio type especially qualified for use in such areas as Intrinsically Safe (for example, Factory Mutual, CSA, UL, or CENELEC).

Do not remove, install or charge batteries in such areas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.

The areas with potentially explosive atmospheres referred to above include fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, and areas where the air contains chemicals or particles such as grain, dust or metal powders. Areas with potentially explosive atmospheres are often, but not always, posted.

**Blasting Caps and Blasting Areas**

To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps, in a blasting area, or in areas posted: "Turn off two-way radio." Obey all signs and instructions.

## Operational Cautions



Caution

### Antennas

Do not use any portable radio that has a damaged antenna if a damaged antenna comes into contact with your skin, a minor burn can result.

### Batteries

All batteries can cause property damage and/or bodily injury, such as burns, if a conductive material such as jewelry, keys, or beaded chains touches exposed terminals. The conductive material may complete an electrical circuit (short circuit) and become quite hot. Exercise care in handling any charged battery, particularly when placing it inside a pocket, purse, or other container with metal objects.

**Intrinsically Safe Radio Information**

The Intrinsically safe approval unit refers to a product that has been approved as intrinsically safe by an approval agency (for example FM Approvals, CSA, UL, or Cenetec) and certifies that a particular product meets the Agency’s applicable intrinsic safety standards for specific types of hazardous classified locations. A portable radio that has been approved for intrinsic safety will have Approval label attached to the radio to identify the unit as being Approved for specified hazardous atmospheres. This label specifies the hazardous Class/Division/Group along with the part number of the battery that must be used. The Intrinsically Safe Approval Label will be located on the portable radio unit.

***Operational Cautions for Intrinsic Safe Equipment***



- Do not operate radio communications equipment in a hazardous atmosphere unless it is a type especially qualified (for example, FM, UL, CSA, or CELENELC approved). An explosion or fire may result.
- Do not operate a radio unit that has been approved as intrinsically safe product in a hazardous atmosphere if it has been physically damaged (for example, cracked housing). An explosion or fire may result.
- Do not replace or charge batteries in a hazardous atmosphere Contact sparking may occur while installing or removing batteries and cause an explosion or fire.

***Warnings for Radios Approved as Intrinsically Safe***

Radios must ship from the Vertex Standard manufacturing facility with the hazardous atmosphere capability and the intrinsic safety approval labelling (FM, UL, CSA, CENELEC). Radios will not be upgraded to this capability and labeled once they have been shipped to the field.

A modification changes the unit's hardware from its original design configuration. Modifications can only be made by the original product manufacturer.



**WARNING**

- **Do not replace or change accessories in a hazardous atmosphere. Contact sparking may occur while installing or removing accessories and cause an explosion or fire.**
- **Turn the radio off before removing or installing a battery or accessory.**
- **Do not disassemble an intrinsically safe product in any way that exposes the internal circuits of the unit.**



**WARNING**

- **Failure to use an intrinsically safe approved battery or Approved accessories specifically approved for the radio unit may result in the dangerously unsafe condition of an unapproved radio combination being used in a hazardous location.**
- **Unauthorized or incorrect modification of the intrinsically safe approved Product will negate the approval rating of the product.**
- **Incorrect repair or relabeling of any intrinsically safe Agency-approved radio could adversely affect the Approval rating of the unit.**
- **Use of a radio that is not intrinsically safe in a hazardous atmosphere could result in serious injury or death.**

**Repair****WARNING**

**REPAIRS FOR VERTEX STANDARD PRODUCTS WITH INTRINSICALLY SAFE APPROVAL ARE THE RESPONSIBILITY OF THE USER.**

**Repairs to a Vertex Standard FM approved radio product should only be done at a location that has been FM audited under the FM 3605 repairs and service standard.**

**Contact Vertex Standard for assistance regarding repairs and service of Vertex Standard intrinsically safe equipment.**

A repair constitutes something done internally to the unit that would bring it back to its original condition.

Items not considered as repairs are those in which an action is performed on a unit which does not require the outer casing of the unit to be opened in a manner that exposes the internal electrical circuits of the unit.

***Do Not Substitute Options or Accessories***

The Vertex Standard equipment certified as intrinsically safe by the approving agency, (FM, UL, CSA, CENELEC) is tested as a complete system which consists of the listed agency Approved portable, Approved battery, and Approved accessories or options, or both. This Approved portable and battery combination must be strictly observed. There must be no substitution of items, even if the substitute has been previously Approved with a different Vertex Standard equipment unit Approved configurations are listed by the Approving Agency (FM, UL, CSA, CENELEC).

The Intrinsically Safe Approval Label affixed to radio refers to the intrinsically safe classification of that radio product, and the approved batteries that can be used with that system. The manual PN referenced on the Intrinsically Safe Approval Label identifies the approved Accessories and or options that can be used with that portable radio unit.

Using a non Vertex Standard intrinsically safe battery and or accessory with the Vertex Standard approved radio unit will void the intrinsically safe approval of that radio unit.



## IMPORTANT SAFETY INFORMATION

### Product Safety and RF Exposure Compliance



Caution

Before using this product, read the “Product Safety and RF Exposure” chapter beginning with page 8.

#### ATTENTION!

**This radio is restricted to occupational use only to satisfy FCC RF energy exposure requirements.**

For a list of Vertex Standard-approved antennas, batteries, and other accessories, visit the following website: <http://www.vertexstandard.com/lmr>

## SOFTWARE VERSION

All the features described in the following sections are supported by the radio’s software version 1.0 Build 10 or later.

See Checking the Firmware Version on page 92 to determine your radio’s software version.

Check with your dealer or system administrator for more details of all the features supported.

## COMPUTER SOFTWARE COPYRIGHTS

The Vertex Standard products described in this manual may include copyrighted Vertex Standard computer programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Vertex Standard certain exclusive rights for copyrighted computer programs including, but not limited to, the exclusive right to copy or reproduce in any form the copyrighted computer program. Accordingly, any copyrighted computer programs contained in the products described in this manual may not be copied, reproduced, modified, reverse-engineered, or distributed in any manner without the express written permission of Vertex Standard LMR, Inc.

Furthermore, the purchase of products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of, except for the normal non-exclusive license to use that arises by operation of law in the sale of a product.

The AMBE+2™ voice coding Technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc.

This voice coding Technology is licensed solely for use within this Communications Equipment. The user of this Technology is explicitly prohibited from attempting to de-compile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into a human-readable form.

U.S. Pat. Nos. #5,870,405, #5,826,222, #5,754,974, #5,701,390, #5,715,365, #5,649,050, #5,630,011, #5,581,656, #5,517,511, #5,491,772, #5,247,579, #5,226,084 and #5,195,166.

## GETTING STARTED

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### ■ How to Use This Guide

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This User Guide covers the basic operation of the Vertex Standard Digital Portables.

However, your dealer or system administrator may have customized your radio for your specific needs. Check with your dealer or system administrator for more information.

Throughout this publication, the icons below are used to indicate features supported in either the conventional Analog mode or conventional Digital mode:

-  Indicates a conventional Analog Mode-Only feature.
-  Indicates a conventional Digital Mode-Only feature.

For features that are available in both conventional Analog and Digital modes, no icon is shown.

### ■ What Your Dealer/System Administrator Can Tell You

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You can consult your dealer or system administrator about the following:

- Is your radio programmed with any preset conventional channels?
- Which buttons have been programmed to access other features?
- What optional accessories may suit your needs?

## **PREPARING YOUR RADIO FOR USE**

Assemble your radio by following these steps:

Charging the Battery.....	page 23
Attaching the Battery .....	page 23
Attaching the Antenna .....	page 24
Attaching the Belt Clip .....	page 24
Powering Up the Radio.....	page 25
Adjusting the Volume.....	page 26

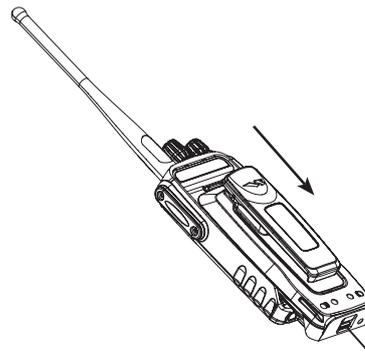
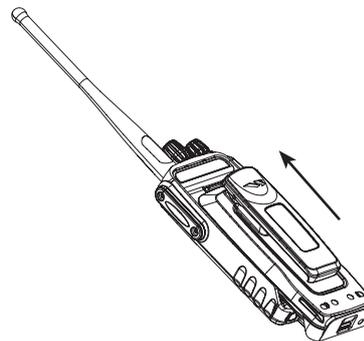
### **■ Charging the Battery**

Your radio is powered by a Nickel Metal-Hydride (Ni-MH) battery. To avoid damage and comply with warranty terms, charge the battery using a Vertex Standard charger as described in the Accessories chapter on page 93.

Charge a new battery 14 to 16 hours before initial use for best performance.

### **■ Attaching the Battery**

Align the battery with the rails on the back of the radio. Press the battery firmly, and slide upward until the latch snaps into place. Slide battery latch into lock position.

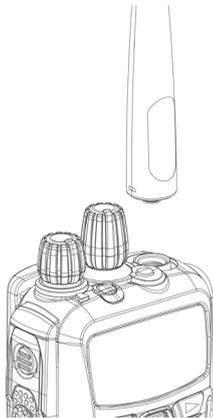


Battery Latch

To remove the battery, turn the radio off. Move the battery latch into unlock position and hold, and slide the battery down and off the rails.

## ■ Attaching the Antenna

With the radio turned off, set the antenna in its receptacle and turn clockwise.



*To remove the antenna, turn the antenna counterclockwise. Make sure you turn off the radio and remove the universal connector cover (dust cover) first.*



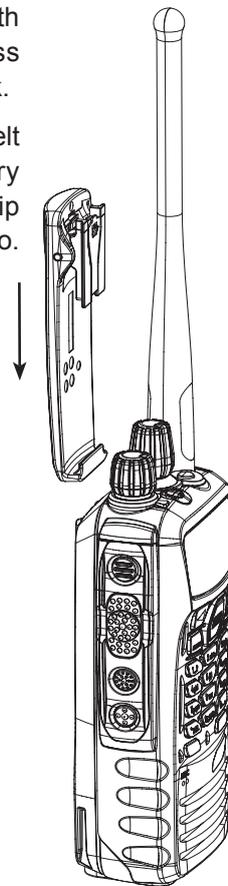
**Caution**

If antenna needs to be replaced, ensure that only Vertex Standard antennas are used. Neglecting this will damage your radio. See Antennas on page 93 for a list of available antennas.

## ■ Attaching the Belt Clip

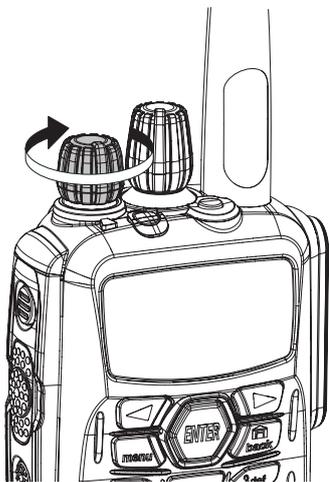
Align the grooves on the clip with those on the battery and press downward until you hear a click.

To remove the clip, press the belt clip tab away from the battery using a key. Then slide the clip upward and away from the radio.



## ■ Powering Up the Radio

Rotate the **On/Off/Volume Control** Knob clockwise until you hear a click. The LED blinks green and the Home screen lights up if the backlight setting is set to turn on automatically.



**NOTE:** The Home screen does not light up during a power up if the LED indicator is disabled (see Turning the LED Indicator On or Off on page 90).

A brief tone sounds, indicating that the power up test is successful.

**NOTE:** There is no power up tone if the radio tones/alerts function is disabled (see Turning the Radio Tones/ Alerts On or Off on page 89).

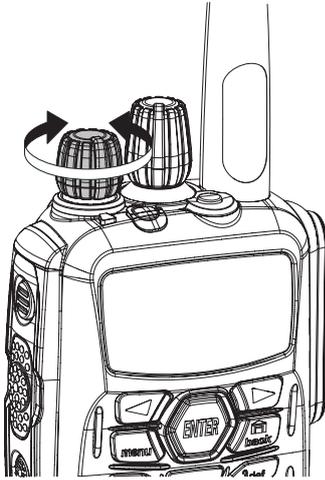
If your radio does not power up, check your battery. Make sure that it is charged and properly attached. If your radio still does not power up, contact your dealer.

To turn off the radio, rotate this knob counterclockwise until you hear a click. You see a brief Powering Down on the radio's display.

## ■ Adjusting the Volume

To increase the volume, turn the **On/Off/Volume Control** Knob clockwise.

To decrease the volume, turn this knob counterclockwise.



## IDENTIFYING RADIO CONTROLS

Take a moment to review the following:

Radio Controls.....	page 27
Programmable Buttons.....	page 28
Accessing the Programmed Functions.....	page 29
Using the Keypad .....	page 30
Push-To-Talk (PTT) Button .....	page 31
Switching Between Conventional Analog and Digital Mode.....	page 32

## ■ Radio Controls



- ①: Channel Selector Knob
- ②: On / Off / Volume Control Knob
- ③: LED Indicator
- ④: Side Button 1 (Programmable Key)
- ⑤: Push-to-Talk (PTT) Button
- ⑥: Side Button 2 (Programmable Key)
- ⑦: Side Button 3 (Programmable Key)
- ⑧: Front Button P1 (Programmable Key)
- ⑨: Microphone
- ⑩: Speaker
- ⑪: Front Button P2 (Programmable Key)
- ⑫: Keypad
- ⑬: Menu Navigation Keys
- ⑭: Universal Connector for Accessories
- ⑮: Display
- ⑯: Emergency Button (Programmable Key)
- ⑰: Antenna

## ■ Programmable Buttons

Your dealer can program the programmable buttons as shortcuts to radio functions or preset channels/groups depending on the duration of a button press:

- Short press – Pressing and releasing rapidly (0.05 seconds).
- Long press – Pressing and holding for the programmed duration (between 1.00 second and 3.75 seconds).
- Hold down – Keeping the button pressed.

**NOTE:** The programmed duration of a button press is applicable for all assignable radio/utility functions or settings. See Emergency Operation on page 56 for more information on the programmed duration of the Emergency button.

## 📄 Assignable Radio Functions

**Contacts** – Provides direct access to the Contacts list.

**Emergency** – Depending on the programming, initiates or cancels an emergency alarm or call.

**Manual Dial** 📞 – Initiates a call by keying in any subscriber ID.

**Manual Site Roam** 📞 – Starts the manual site search.

**Monitor** – Monitors a selected channel for activity.

**Nuisance Channel Delete** – Temporarily removes an unwanted channel, except for the Selected Channel, from the scan list. The Selected Channel refers to the user's selected zone/channel combination from which scan is initiated.

**One Touch Access** 📞 – Directly initiates a predefined Private or Group Call, a Call Alert or a Quick Text message.

**Permanent Monitor** – Monitors a selected channel for all radio traffic until function is disabled.

**Privacy** 📞 – Toggles privacy on or off.

**Radio Check** 📞 – Determines if a radio is active in a system.

**Radio Enable** 📞 – Allows a target radio to be remotely enabled.

**Radio Disable** 📞 – Allows a target radio to be remotely disabled.

**Remote Monitor** – Turns on the microphone of a target radio without it giving any indicators.

**Repeater/Talkaround** – Toggles between using a repeater and communicating directly with another radio.

**Scan** – Toggles scan on or off.

**Text Message**  – Selects the text message menu.

**Transmit Interrupt Remote Dekey**  – Stops the transmission of a remote monitored radio without giving any indicators, or an ongoing interruptible call to free the channel.

**Voice Operating Transmission (VOX)** – Toggles VOX on or off.

**Zone** – Allows selection from a list of zones.

### **Assignable Settings or Utility Functions**

**All Tones/Alerts** – Toggles all tones and alerts on or off.

**Backlight** – Toggles display backlight on or off.

**Keypad Lock** – Toggles keypad between locked and unlocked.

**Power Level** – Toggles transmit power level between high and low.

**Squelch**  – Toggles squelch level between tight and normal.

## ■ Accessing the Programmed Functions

You can access various radio functions through one of the following ways:

- A short or long press of the relevant programmable buttons.



OR

- Use the Menu Navigation Buttons as follows:

- 1 To access the menu, press the  button. Press the appropriate Menu Scroll button ( or ) to access the menu functions.
- 2 To select a function or enter a sub-menu, press the  button.
- 3 To go back one menu level, or to return to the previous screen, press the  button. Long press the  button to return to the Home screen.

**NOTE:** Your radio automatically exits the menu after a period of inactivity and returns to your Home screen.

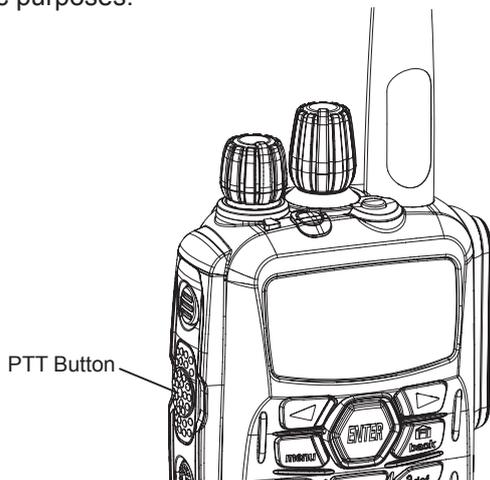
## ■ Using the Keypad

You can use the 3 x 4 alphanumeric keypad to access your radio's features. You can use the keypad to enter subscriber aliases or IDs, and text messages. Many characters require that you press a key multiple times. The table below shows the number of times a key needs to be pressed to generate the required character.

Key	Number of Times Key is Pressed												
	1	2	3	4	5	6	7	8	9	10	11	12	13
	1	.	,	?	!	@	&	'	&	-	:	*	#
	A	B	C	2									
	D	E	F	3									
	G	H	I	4									
	J	K	L	5									
	M	N	O	6									
	P	Q	R	S	7								
	T	U	V	8									
	W	X	Y	Z	9								
	0	<b>NOTE:</b> Press to enter "0" and long press to activate the CAPS lock. Another long press to turn off the CAPS lock											
	* or del	<b>NOTE:</b> Press during text entry to delete the character. Press during numeric entry to enter a "**".											
	# or space	<b>NOTE:</b> Press during text entry to insert a space. Press during numeric entry to enter a "##".											

## ■ Push-To-Talk (PTT) Button

The **PTT** button on the side of the radio serves two basic purposes:



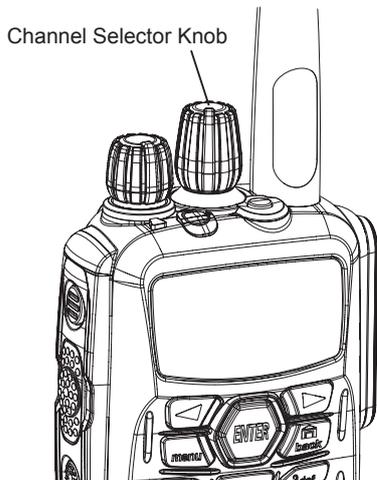
- While a call is in progress, the **PTT** button allows the radio to transmit to other radios in the call.  
Press and hold down **PTT** button to talk. Release the **PTT** button to listen.  
The microphone is activated when the **PTT** button is pressed.
- While a call is not in progress, the **PTT** button is used to make a new call (see **Making a Radio Call** on page 41).

If the *Talk Permit Tone* (see **Turning the Talk Permit Tone On or Off** on page 90) or the *PTT Sidetone* (📞) is enabled, wait until the short alert tone ends before talking.

- 📞 During a call, if the *Channel Free Indication* feature is enabled on your radio (programmed by your dealer), you will hear a short alert tone the moment the target radio (the radio that is receiving your call) releases the **PTT** button, indicating the channel is free for you to respond.
- 📞 You will also hear the *Channel Free Indication* tone if your call is interrupted, for example when the radio receives an *Emergency Call*.  
You can turn off the *Channel Free Indication* tone or the *PTT Sidetone* (📞) by disabling all radio tones and alerts (see **Turning the Radio Tones/Alerts On or Off** on page 89).

## ■ Switching Between Conventional Analog and Digital Mode

Each channel in your radio can be configured as a conventional analog or conventional digital channel. Use the **Channel Selector** Knob to switch between an analog or a digital channel.



When switching from digital to analog mode, certain features are unavailable. Icons for the digital features (such as Messages) reflect this change by appearing 'grayed out'.

Disabled features are hidden in the menu.

Your radio also has features available in both analog and digital mode. However, the minor differences in the way each feature works does NOT affect the performance of your radio.

**NOTE:** Your radio also switches between digital and analog modes during a dual mode scan (see **Scan** on page 44).

## IDENTIFYING STATUS INDICATORS

Your radio indicates its operational status through the following:

Display Icons ..... page 33  
 Call Icons..... page 34  
 Sent Item Icons..... page 35  
 LED Indicator..... page 35  
 Audio Tones..... page 36  
 Indicator Tones ..... page 38

### ■ Display Icons

The full dot matrix, black and white, liquid crystal display (LCD) of your radio shows radio status, text entries, and menu entries.

The following are icons that appear on the radio's display.

- 
**Received Signal Strength Indicator (RSSI)**  
 The number of bars displayed represents the radio signal strength. Four bars indicate the strongest signal. This icon is only displayed while receiving.
  
- 
**Monitor**  
 Selected channel is being monitored.

- 
**Power Level**  
 Radio is set at Low power.
- 
**Power Level**  
 Radio is set at High power.
- 
**Tones Disable**  
 Tones are turned off.
- 
**Scan\***  
 Scan feature is enabled.
- 
**Priority Scan\***  
 Radio detects activity on channel/group designated as Priority 1 (if "■" is blinking) or Priority 2 (if "■" is steady).
- 
**Unread Message**   
 User has unread message(s) in the Inbox.
- 
**Inbox Full**   
 User's Inbox is full.
- 
**Emergency**  
 Radio is in Emergency mode.
- 
**Secure**   
 The Privacy feature is enabled.
- 
**Unsecure**   
 The Privacy feature is disabled.



## **Talkaround**

In the absence of a repeater, radio is currently configured for direct radio to radio communication.



## **Battery**

The number of bars (0 – 4) shown indicates the charge remaining in the battery. Blinks when the battery is low.

## ■ **Call Icons**

---

The following icons appear on the radio's display during a call.

These icons also appear in the Contacts list to indicate ID type.



### **Private Call**

Indicates a Private Call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).



### **Group Call/All Call**

Indicates a Group Call or All Call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).

## ■ Sent Item Icons

The following icons appear at the top right corner of the radio's display in the Sent Items folder.



### **Sent Successfully**

The text message is sent successfully.



### **Send Failed**

The text message cannot be sent.

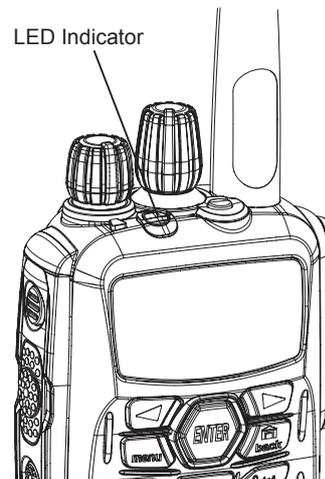


### **In-Progress**

- The text message to a group alias or ID is pending transmission.
- The text message to a subscriber alias or ID is pending transmission, followed by waiting for acknowledgement.

## ■ LED Indicator

The LED indicator shows the operational status of your radio.



**Blinking red** – Radio is transmitting at low battery condition, receiving an emergency transmission or has failed the self-test upon powering up.

**Solid yellow** – Radio is monitoring a channel.

**Blinking yellow** – Radio is scanning for activity or receiving a Call Alert.

**Solid green** – Radio is transmitting.

**Blinking green** – Radio is powering up, receiving

a non privacy-enabled call or data, or detecting activity over the air.

**Rapidly blinking green** – Radio is receiving a privacy-enabled call or data .

**NOTE:** While in conventional mode, when the LED blinks green, it indicates the radio detects activity over the air.

Due to the nature of the digital protocol, this activity may or may not affect the radio's programmed channel.

Upon a **PTT** button press, if the radio is programmed for polite operation, the radio automatically determines whether a transmission is permitted via a Talk Permit or a Talk Denial tone.

## ■ Audio Tones

---

Alert tones provide you with audible indications of the radio's status or the radio's response to data received.

**Continuous Tone**  A monotone sound. Sounds continuously until termination.

**Periodic Tone**  Sounds periodically depending on the duration set by the radio. Tone starts, stops, and repeats itself.

**Repetitive Tone**  A single tone that repeats itself until it is terminated by the user.

**Momentary Tone**  Sounds only once for a short period of time defined by the radio.

## ■ Indicator Tones

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- High pitched tone □      Low pitched tone ■
-  Positive Indicator Tone
-  Negative Indicator Tone

## MAKING AND RECEIVING CALLS

---

Once you understand how your Vertex Standard Portable is configured, you are ready to use your radio.

Use this navigation guide to familiarize yourself with the basic Call features:

Selecting a Zone.....	page 38
Selecting a Radio Channel, Subscriber ID, or Group ID.....	page 38
Receiving and Responding to a Radio Call	page 39
Making a Radio Call .....	page 41
Talkaround .....	page 45
Monitoring Features.....	page 46

## ■ Selecting a Zone

---

A zone is a group of channels. Your radio supports up to 250 zones, with a maximum of 16 channels per zone.

Use the following procedure to select a zone.

### Procedure:

Press the programmed Zone button and proceed to Step 3.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to Zone and press  to select.

---

- 3 The current zone is displayed and indicated by a “√”.

---

- 4  or  to the required zone and press  to select.

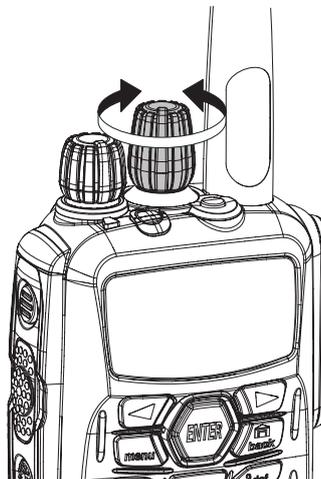
---

- 5 The display shows “<Zone> Selected” momentarily and returns to the selected zone screen.

---

## ■ Selecting a Radio Channel, Subscriber ID, or Group ID

---



### Procedure:

Once the required zone is displayed (if you have multiple zones in your radio), turn the programmed Channel Selector Knob to select the channel, subscriber alias or ID, or group alias or ID.

---

## ■ Receiving and Responding to a Radio Call

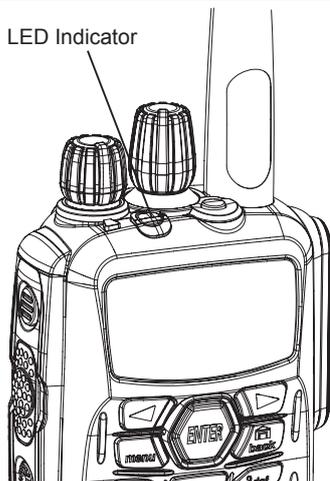
Once the channel, subscriber ID or group ID is displayed, you can proceed to receive and respond to calls.

The LED lights up solid green while the radio is transmitting and blinks green when the radio is receiving.

**NOTE:** The LED lights up solid green while the radio is transmitting and blinks green rapidly when the radio is receiving a privacy-enabled call.

To unscramble a privacy-enabled call, your radio must have the same Privacy Key, OR the same Key Value and Key ID (programmed by your dealer), as the transmitting radio (the radio you are receiving the call from).

See Privacy on page 72 for more information .



## Receiving and Responding to a Group Call

To receive a call from a group of users, your radio must be configured as part of that group.

### Procedure:

When you receive a Group Call (while on the Home screen):

- 1 The LED blinks green.
- 2 The first line of the display shows the caller alias, and the RSSI icon. The second line displays the group alias and the Group Call icon (in Digital mode only).
- 3 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
- 4  If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.
- 5 The LED lights up solid green.
- 6 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.  
OR  
 Wait for the PTT Sidetone to finish (if enabled) and speak clearly into the microphone.

- 7 Release the **PTT** button to listen.
- 8 If there is no voice activity for a predetermined period of time, the call ends.

See Making a Group Call on page 32 for details on making a Group Call.

**NOTE:** If the radio receives a Group Call while not on the Home screen, it remains on its current screen prior to answering the call. Long press the  button to go to the Home screen to view the caller alias before replying.

### **Receiving and Responding to a Private Call**

A Private Call is a call from an individual radio to another individual radio.

There are two types of Private Calls. The first type, where a radio presence check is performed prior to setting up the call, while the other sets up the call immediately.

When your radio is checked, the LED blinks green.

Only one of these call types can be programmed to your radio by your dealer.

#### **Procedure:**

When you receive a Private Call:

- 1 The LED blinks green.

- 2 The first line of the display shows the subscriber alias or ID, and the RSSI icon. The second line displays Private Call and the Private Call icon.
- 3 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
- 4 If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.
- 5 The LED lights up solid green.
- 6 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 7 Release the **PTT** button to listen.
- 8 If there is no voice activity for a predetermined period of time, the call ends.
- 9 You hear a short tone. The display shows Call Ended.

See **Making a Private Call** on page 42 for details on making a Private Call.

## Receiving an All Call

An All Call is a call from an individual radio to every radio on the channel. It is used to make important announcements requiring the user's full attention.

### Procedure:

When you receive an All Call:

- 1 A tone sounds and the LED blinks green.
- 2 The first line of the display shows the caller alias, and the RSSI icon. The second line displays All Call and the All Call icon.
- 3 Once the All Call ends, the radio returns to the previous screen before receiving the call.

 If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is now available for use.

*You cannot respond to an All Call.*

See **Making an All Call** on page 43 for details on making an All Call.

**NOTE:** The radio stops receiving the All Call if you switch to a different channel while receiving the call.

During an All Call, you will not be able to use any programmed button functions until the call ends.

## ■ Making a Radio Call

You can select a channel, subscriber ID, or group by using:

- The **Channel Selector** Knob
- A programmed **One Touch Access** button 
- The Contacts list (see **Contacts Settings** on page 55)
- Manual Dial (via Contacts) – This method is for Private Calls only and is dialed using the keypad (see **Making a Private Call from Contacts** on page 57) 

**NOTE:** Your radio must have the Privacy feature enabled on the channel to send a privacy-enabled transmission.

Only target radios with the same Privacy Key OR the same Key Value and Key ID as your radio will be able to unscramble the transmission.

See **Privacy** on page 81 for more information. 

## **Making a Call with the Channel Selector Knob**

### **Making a Group Call**

To make a call to a group of users, your radio must be configured as part of that group.

#### **Procedure:**

- 1 Turn the **Channel Selector** Knob to select the channel with the active group alias or ID.
- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
- 3 Press the **PTT** button to make the call. The LED lights up solid green. The display shows the group alias or ID, and the Group Call icon.
- 4 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.  
OR  
 Wait for the PTT Sidetone to finish (if enabled) and speak clearly into the microphone.
- 5 Release the **PTT** button to listen. When the target radio responds, the LED blinks green. You see the Group Call icon, the group alias or ID, and transmitting radio alias or ID on your display.
- 6  If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to

respond. Press the **PTT** button to respond.

OR

If there is no voice activity for a predetermined period of time, the call ends.

- 7 Radio returns to the screen you were on prior to initiating the call.

You can also make a Group Call via Contacts (see **Making a Group Call from Contacts** on page 56).

### **Making a Private Call**

While you can receive and/or respond to a Private Call initiated by an authorized individual radio, your radio must be programmed for you to initiate a Private Call.

You will hear a negative indicator tone, when you make a Private Call via the Contacts list, Call Log, **One Touch Access** button, or the Channel Selector Knob, if this feature is not enabled.

Use the Text Message or Call Alert features to contact an individual radio. See **Text Message Features** on page 70 or **Call Alert Operation** on page 63 for more information.

#### **Procedure:**

- 1 Turn the **Channel Selector** Knob to select the channel with the active subscriber alias or ID.

- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
- 3 Press the **PTT** button to make the call. The LED lights up solid green. The first line displays the subscriber alias or ID. The second line displays Private Call and the Private Call icon.
- 4 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 5 Release the **PTT** button to listen. When the target radio responds, the LED blinks green.
- 6 If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond.  
OR  
If there is no voice activity for a predetermined period of time, the call ends.
- 7 You hear a short tone. The display shows Call Ended.

*You can also make a Private Call via Contacts (see **Making a Private Call** from Contacts on page 57) or perform a quick alphanumeric search for the required alias via a keypad entry (see **Making a Private Call by Alias Search** on page 58).*

### **Making an All Call**

This feature allows you to transmit to all users on the channel.

Your radio must be programmed to allow you to use this feature.

#### **Procedure:**

- 1 Turn the Channel Selector Knob to select the channel with the active All Call group alias or ID.
- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
- 3 Press the **PTT** button to make the call. The LED lights up solid green. The display shows the All Call group alias or ID, and the All Call icon.
- 4 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.  
OR  
 Wait for the PTT Sidetone to finish (if enabled) and speak clearly into the microphone.

*Users on the channel cannot respond to an All Call.*

## **Making a Group or Private Call with the One Touch Access Button**

The One Touch Access feature allows you to make a Group or Private Call to a predefined alias or ID easily. This feature can be assigned to a short or long programmable button press.

You can ONLY have one alias or ID assigned to a One Touch Access button. Your radio can have multiple One Touch Access buttons programmed.

### **Procedure:**

- 1 Press the programmed **One Touch Access** button to make a Group or Private Call to the predefined alias or ID.

---

- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

---

- 3 Press the **PTT** button to make the call. The LED lights up solid green. The display shows the group/subscriber alias or ID, and the Group/Private Call icon.

---

- 4 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.  
OR  
 **For Group Call only:** Wait for the PTT Sidetone to finish (if enabled) and speak clearly into the microphone.

---

- 5 Release the **PTT** button to listen. When the target radio responds, the LED blinks green.

---

- 6 If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond.  
OR  
If there is no voice activity for a predetermined period of time, the call ends.

---

- 7 Radio returns to the screen you were on prior to initiating the call.

---

*For a Private Call, you hear a short tone when the call ends.*

## ■ Talkaround

---

You can continue to communicate when your repeater is not operating, or when your radio is out of the repeater's range but within talking range of other radios.

This is called "talkaround".

### Procedure:

Press the programmed **Repeater/Talkaround** button to toggle between talkaround and repeater modes.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to "Utilities" and press  to select.

---

- 3  or  to "Radio Settings" and press  to select.

---

- 4  or  to "Talkaround" and press  to select.

---

- 5 You see "Turn On" if the radio is currently in Repeater mode.  
OR  
You see "Turn Off" if the radio is currently in Talkaround mode.

---

- 6 Press  to select.

---

- 7 The display shows "Talkaround On".  
OR  
The display shows "Talkaround Off".

---

- 8 The screen automatically returns to the previous menu.

---

*The Talkaround setting is retained even after powering down.*

## ■ Monitoring Features

---

### 📄 *Monitoring a Channel*

Use the Monitor feature to make sure a channel is clear before transmitting.

#### **Procedure:**

- 1 Press and hold the programmed **Monitor** button and listen for activity.
  - 2 The monitor icon appears on the display and the LED lights up solid yellow.
  - 3 You hear radio activity or total silence, depending on how your radio is programmed.
  - 4 When you hear “white noise” (that is, the channel is free), press the **PTT** button to talk and release it to listen.
- 

### 📄 *Permanent Monitor*

Use the Permanent Monitor feature to continuously monitor a selected channel for activity.

#### **Procedure:**

- 1 Press the programmed Permanent Monitor button.
  - 2 Radio sounds an alert tone, the LED lights up solid yellow, and the display shows “Permanent Monitor On”. The monitor icon appears on the display.
  - 3 Press the programmed **Permanent Monitor** button to exit Permanent Monitor mode.
  - 4 Radio sounds an alert tone, the LED turns off, and display shows “Permanent Monitor Off”.
-

## ADVANCED FEATURES

Use this navigation guide to learn more about advanced features available with your radio:

Radio Check.....	page 47
Remote Monitor.....	page 49
Scan Lists.....	page 51
Scan.....	page 53
Contacts Settings.....	page 55
Call Indicator Settings.....	page 59
Call Log Features.....	page 62
Call Alert Operation.....	page 63
Emergency Operation.....	page 64
Text Message Features.....	page 70
Privacy.....	page 81
Dual Tone Multi Frequency (DTMF).....	page 92
Security.....	page 93
Lone Worker.....	page 95
Utilities.....	page 95

## Radio Check

If enabled, this feature allows you to determine if another radio is active in a system without disturbing the user of that radio. No audible or visual notification is shown on the target radio.

This feature is only applicable for subscriber aliases or IDs.

### **Sending a Radio Check**

#### **Procedure:**

Use the programmed Radio Check button.

- 1 Press the **Programmed Radio Check** button.
- 2  or  to the required subscriber alias or ID and press  to select.
- 3 The display shows Radio Check: “<Subscriber Alias or ID>”, indicating that Radio Check is in progress. The LED lights up solid green.
- 4 Wait for acknowledgement.
- 5 If the target radio is active in the system, a tone sounds and the display briefly shows “Target Radio Available”.  
OR  
If the target radio is not active in the system, a tone sounds and the display briefly shows “Target Radio Not Available”.
- 6 Radio returns to the subscriber alias or ID screen.

OR

## Procedure:

Use the menu.

- 1  to access the menu.

---

- 2  or  to “Contacts” and press  to select.

---

- 3  or  to the required subscriber alias or ID and press  to select.

OR

 or  to “Manual Dial” and press  to select.

If there was previously dialed ID, the ID appears along with a blinking cursor. Use the keypad to edit the ID. Press  to select.

OR

 or  to “Manual Dial” and press  to select. Key in the subscriber alias or ID and press .

- 4  or  to “Radio Check” and press  to select.

---

5 The display shows “Radio Check: <Subscriber Alias or ID>”, indicating that Radio Check is in progress. The LED lights up solid green.

---

6 Wait for acknowledgement.

---

7 If the target radio is active in the system, a tone sounds and the display briefly shows “Target Radio Available”.

OR

If the target radio is not active in the system, a tone sounds and the display briefly shows “Target Radio Not Available”.

---

8 Radio returns to the subscriber alias or ID screen.

---

*If the  button is pressed when the radio is waiting for acknowledgement, a tone sounds, and the radio terminates all retries and exits Radio Check mode.*

## ■ Remote Monitor

Use the Remote Monitor feature to turn on the microphone of a target radio (subscriber alias or IDs only). No audible or visual indication is given to the target radio. You can use this feature to monitor, remotely, any audible activity surrounding the target radio.

Your radio must be programmed to allow you to use this feature.

### *Initiating Remote Monitor*

#### **Procedure:**

Use the programmed **Remote Monitor** button.

- 1 Press the programmed **Remote Monitor** button.

---

- 2  or  to the required subscriber alias or ID and press  to select.

---

- 3 Radio sounds an alert tone and the LED blinks green.

---

- 4 Wait for acknowledgment.

---

- 5 The display shows “Remote Monitor Successful”.  
OR  
The display shows “Remote Monitor Failed”.

- 6 If successful:

The radio starts receiving audio from the monitored radio for a programmed duration.

Once the timer expires, the radio sounds an alert tone and the LED turns off. The display shows “Remote Monitor Ended”.

OR

If unsuccessful:

The radio repeats the attempt until the programmed number of tries expires.

OR

#### **Procedure:**

Use the menu.

- 1  to access the menu.

---

  - 2  or  to “Contacts” and press  to select.

---

  - 3  or  to the required subscriber alias or ID and press  to select.
- OR
-  or  to “Manual Dial” and press  to select.
- If there was previously dialed ID, the ID appears along with a blinking cursor. Use the keypad to edit the ID. Press  to select.
- OR
-  or  to “Manual Dial” and press  to select. Key in the subscriber alias or ID and press  to select.

- 4  or  to “Remote Mon.” and press  to select.

---

- 5 Radio sounds an alert tone and the LED blinks green.

---

- 6 Wait for acknowledgment.

---

- 7 The display shows “Remote Monitor Successful”.  
OR  
The display shows “Remote Monitor Failed”.

---

- 8 If successful:  
The radio starts receiving audio from the monitored radio for a programmed duration.  
Once the timer expires, the radio sounds an alert tone and the LED turns off. The display shows “Remote Monitor Ended”.  
OR  
If unsuccessful:  
The radio repeats the attempt until the programmed number of tries expires.

---

## **Stopping Remote Monitor**

### **Procedure:**

- 1 Press the programmed **Transmit Interrupt Remote Dekey** button.

---

- 2 The display shows “Remote Dekey”.

---

- 3 Wait for acknowledgment.

---

- 4 The radio sounds a positive indicator tone and the display shows “Remote Dekey Success”, indicating that the channel is now free.  
OR  
The radio sounds a negative indicator tone and the display shows “Remote Dekey Failed”.

---

## ■ Scan Lists

Scan lists are created and assigned to individual channels/groups. Your radio scans for voice activity by cycling through the channel/group sequence specified in the scan list for the current channel/group.

Your radio can support up to 250 scan lists, with a maximum of 16 members in a list. Each scan list supports a mixture of both analog and digital entries.

You can add, delete, or prioritize channels by editing a scan list.

### 📄 Viewing an Entry in the Scan List

#### Procedure:

- 1  to access the menu.

---

- 2  or  to “Scan” and press  to select.

---

- 3  or  to “View/Edit List” and press  to select.

---

- 4 Use  or  to view each member on the list.

*The priority icon appears left of the member’s alias, if set, to indicate whether the member is on a Priority 1 or Priority 2 channel list. You **cannot** have multiple Priority 1 or Priority 2 channels in a scan list.*

*There is no priority icon if priority is set to **None**.*

### 📄 Editing the Scan List

### 📄 Adding a New Entry to the Scan List

#### Procedure:

- 1  to access the menu.

---

- 2  or  to “Scan” and press  to select.

---

- 3  or  to “View/Edit List” and press  to select.

---

- 4  or  to “Add Member” and press  to select.

---

- 5  or  to the required alias or ID and press  to select.

---

- 6  or  to the required priority level and press  to select.

---

- 7 The display shows “Entry Saved”, followed immediately by “Add Another?”.

---

- 8  or  to “Yes” and press  to select, to add another entry, and repeat Steps 5 and 6.  
OR  
 or  to “No” and press  to select to save the current list.

## 📄 *Deleting an Entry from the Scan List*

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Scan” and press  to select.

---

- 3  or  to “View/Edit List” and press  to select.

---

- 4  or  to the required alias or ID and press  to select.

---

- 5  or  to “Delete” and press  to select.

---

- 6 At “Delete Entry?”,  or  to “Yes” and press  to select, to delete the entry. The display shows “Entry Deleted”.

---

- OR

---

-  or  to “No” and press  to select to return to the previous screen.

---

- 7 Repeat Steps 4 to 6 to delete other entries.

*After deleting all required aliases or IDs, long press*

 *to return to the Home screen.*

## 📄 *Setting and Editing Priority for an Entry in the Scan List*

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Scan” and press  to select.

---

- 3  or  to “View/Edit List” and press  to select.

---

- 4  or  to the required alias or ID and press  to select.

---

- 5  or  to “Edit Priority” and press  to select.

---

- 6  or  to the required priority level and press  to select.

---

- 7 The display shows “Entry Saved” before returning to the previous screen.

---

- 8 The priority icon appears left of the member’s name.

*There is no priority icon if priority is set to **None**.*

## ■ Scan

When you start a scan, your radio cycles through the programmed scan list for the current channel looking for voice activity.

The LED blinks yellow and you see the scan icon on the display.

During a dual mode scan, if you are on a digital channel, and your radio locks onto an analog channel, it automatically switches from digital mode to analog mode for the duration of the call. This is also true for the reverse.

There are two ways of initiating scan:

- **Main Channel Scan (Manual):** Your radio scans all the channels/groups in your scan list. On entering scan, your radio may – depending on the settings – automatically start on the last scanned “active” channel/group or on the channel where scan was initiated.
- **Auto Scan (Automatic):** Your radio automatically starts scanning when you select a channel/group that has Auto Scan enabled.

## 📄 Starting and Stopping Scan

### Procedure:

Press the programmed **Scan** button to start or stop Scan.

OR

Follow the procedure below.

- 1 Use the **Channel Selector** Knob to select a channel programmed with a scan list.
- 2  to access the menu.
- 3  or  to “Scan” and press  to select.
- 4 The display shows “Turn On” if scan is disabled.  
OR  
The display shows “Turn Off” if scan is enabled.
- 5 Press  to select.
- 6 The LED blinks yellow and the scan icon is displayed when Scan is enabled.  
OR  
The LED turns off and the scan icon is not displayed when Scan is disabled.

*While scanning, the radio will only accept data (e.g. text message) if received on its Selected Channel.*

## 📄 Responding to a Transmission During a Scan

During scanning, your radio stops on a channel/group where activity is detected. The radio stays on that channel for a programmed time period known as “hang time”.

### Procedure:

- 1 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
  - 🔊 If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond.
- 2 Press the **PTT** button during hang time. The LED lights up solid green.
- 3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
 

OR

  - 🔊 Wait for the PTT Sidetone to finish (if enabled) and speak clearly into the microphone.
- 4 Release the **PTT** button to listen.
- 5 If you do not respond within the hang time, the radio returns to scanning other channels/groups.

## 📄 Deleting a Nuisance Channel

If a channel continually generates unwanted calls or noise (termed a “nuisance” channel), you can temporarily remove the unwanted channel from the scan list.

This capability does not apply to the channel designated as the Selected Channel.

### Procedure:

- 1 When your radio “locks on to” an unwanted or nuisance channel, press the programmed **Nuisance Channel Delete** button until you hear a tone.
- 2 Release the **Nuisance Channel Delete** button. The nuisance channel is deleted.

*Deleting a “nuisance” channel is **only** possible through the programmed **Nuisance Channel Delete** button. This feature is **not** accessible through the menu.*

## Restoring a Nuisance Channel

### Procedure:

To restore the deleted nuisance channel, do one of the following:

- Turn the radio off and then power it on again, OR
- Stop and restart a scan via the programmed **Scan** button or menu, OR
- Change the channel via the **Channel Selector Knob**.

## ■ **Contacts Settings**

---

Contacts provides “address-book” capabilities on your radio. Each entry corresponds to an alias or ID that you use to initiate a call.

Additionally, each entry, depending on context, associates with one of five types of calls: Group Call, Private Call or All Call.

**NOTE:** If the Privacy feature is enabled on a channel, you can make privacy-enabled Group Call, Private Call, and All Call on that channel. Only target radios with the same Privacy Key OR the same Key Value and Key ID as your radio will be able to unscramble the transmission.

See **Privacy** on page 81 for more information. 

Your radio supports two Contacts lists, one for Analog contacts and one for Digital contacts, with a maximum of 500 members for each Contacts list.

Each entry within Contacts displays the following information:

- Call Type
- Call Alias
- Call ID

**NOTE:** You can add, delete, or edit subscriber IDs for the Digital Contacts list.

For the Analog Contacts list, you can only view the list and initiate a Call Alert. Adding, deleting, and editing capabilities can only be performed by your dealer.

## Making a Group Call from Contacts

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Contact” and press  to select. The entries are alphabetically sorted.

---

- 3  or  to the required group alias or ID.

---

- 4 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

---

- 5 Press the **PTT** button to make the call. The LED lights up solid green. The display shows the group alias or ID, and the Group Call icon.

---

- 6 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

OR

- 6  Wait for the PTT Sidetone to finish (if enabled) and speak clearly into the microphone.

- 7 Release the **PTT** button to listen. When any user in the group responds, the LED blinks green. You see the Group Call icon, the group ID, and that user’s ID on your display.

- 8  If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond.

OR

If there is no voice activity for a programmed period of time, the call ends.

---

## Making a Private Call from Contacts

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Contact” and press  to select. The entries are alphabetically sorted.

---

- 3  or  to the required subscriber alias or ID.  
OR  
 or  to “Manual Dial” and press  to select.  
If there was previously dialed subscriber alias or ID, the alias or ID appears along with a blinking cursor.  
Use the keypad to edit the ID.  
OR  
 or  to “Manual Dial” and press  to select.  
Use the keypad to enter a new subscriber alias or ID.

---

- 4 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

---

- 5 Press the **PTT** button to make the call. The LED lights up solid green. The first line displays the subscriber alias or ID.  
The second line displays “Private Call” and the Private Call icon.

---

- 6 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

---

- 7 Release the **PTT** button to listen. When the target radio responds, the LED blinks green and the display shows the transmitting user’s ID.

---

- 8 If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond.  
OR  
If there is no voice activity for a programmed period of time, the call ends.

---

- 9 You hear a short tone. The display shows “Call Ended”.

---

## Making a Private Call by Alias Search

You can also use alias or alphanumeric search to retrieve the required subscriber alias.

This feature is only applicable while in Contacts.

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Contact” and press  to select. The entries are alphabetically sorted.

---

- 3 Key in the first character of the alias.

---

- 4  or  to the required alias.

---

- 5 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

---

- 6 Press the **PTT** button to make the call. The LED lights up solid green. The first line displays the target radio’s ID. The second line displays “Private Call” and the Private Call icon.

---

- 7 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

---

- 8 Release the **PTT** button to listen. When the target radio responds, the LED blinks green.

---

- 9 If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond.

OR

If there is no voice activity for a programmed period of time, the call ends.

- 10 You hear a short tone. The display shows “Call Ended”.

**NOTE:** If you release the **PTT** button while the radio is setting up the call, it exits without any indication and returns to the previous screen.

Your radio may be programmed to perform a radio presence check prior to setting up the Private Call. If the target radio is not available, you hear a short tone and see “Party Not Available” on the display.

The radio returns to the menu prior to initiating the radio presence check.

## ■ Call Indicator Settings

### ☰ Activating and Deactivating Call Ringers for Private Calls

You can turn on or off the ringing tones for a received Private Call.

#### Procedure:

- 1  to access the menu.
- 2  or  to “Utilities” and press  to select.
- 3  or  to “Radio Settings” and press  to select.
- 4  or  to “Tones/Alerts” and press  to select.
- 5  or  to “Call Ringers” and press  to select.
- 6  or  to “Private Call” and press  to select.
- 7 The display shows “Turn On”. Press  to enable Call Ringers for Private Calls. The display shows “Private Call Ringer On”.

OR

The display shows “Turn Off”. Press  to disable Call Ringers for Private Calls. The display shows “Private Call Ringer Off”.

### ☰ Activating and Deactivating Call Ringers for Text Message

You can turn on or off the ringing tones for a received Text Message.

#### Procedure:

- 1  to access the menu.
- 2  or  to “Utilities” and press  to select.
- 3  or  to “Radio Settings” and press  to select.
- 4  or  to “Tones/Alerts” and press  to select.
- 5  or  to “Call Ringers” and press  to select.
- 6  or  to “Text Message” and press  to select.
- 7 The current tone is indicated by a “✓”.
- 8  or  to the preferred tone and press  to select.

The display shows “Tone <Number> Selected” and a “✓” appears left of the selected tone.

OR

 or  to “Turn Off” and press  to select. The display shows “Text Message Ringer Off” and a “✓” appears left of “Turn Off”.

### Assigning Ring Styles

You can program your radio to sound one of ten predefined ringing tones when receiving a Call Alert or a Text Message from a particular contact.

#### Procedure:

- 1  to access the menu.

---

- 2  or  to “Contacts” and press  to select.  
The entries are alphabetically sorted.

---

- 3  or  to the required alias or ID and press  to select.

---

- 4  or  to “Ring Style” and press  to select.

---

- 5 A “✓” indicates the current selected tone.

---

- 6  or  to the required tone and press  to select.

---

- 7 The display shows “Contact Saved”.

*The radio sounds out each ring style as you navigate through the list.*

### Escalating Alarm Tone Volume

You can program your radio to continually alert you when a radio call remains unanswered. This is done by automatically increasing the alarm tone volume over time. This feature is known as Escalert.

#### Procedure:

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Settings” and press  to select.

---

- 4  or  to “Tones/Alerts” and press  to select.

---

- 5  or  to “Escalert” and press  to select.

---

- 6 The display shows Turn On. Press  to enable Escalert.  
The display shows “Escalert On”.  
OR  
The display shows Turn Off. Press  to disable Escalert.  
The display shows “Escalert Off”.

## ■ Call Log Features

Your radio keeps track of all recent outgoing, answered, and missed Private Calls. Use the call log feature to view and manage recent calls.

You can perform the following tasks in each of your call lists:

- Store ID to Contacts
- Delete

### Viewing Recent Calls

The lists are Missed, Answered, and Outgoing.

#### Procedure:

- 1  to access the menu.
- 2  or  to “Call Log” and press  to select.
- 3  or  to preferred list and press  to select.
- 4 The display shows the most recent entry at the top of the list.
- 5  or  to view the list.

*Press the **PTT** button to start a Private Call with the current selected alias or ID.*

### Missed Call Screen

Whenever a call is missed, your radio displays a missed call message. Select View to view it immediately or View Later to view at a later time.

**NOTE:** The radio exits the Missed Call screen and sets up a Private Call if you press the **PTT** button while viewing a missed call number.

#### Procedure:

- 1 The display shows “Missed Calls”, along with the number of calls missed and “View?”.
- 2 Press  to view the missed call ID. The missed call log list appears on display.  
Press  to store or delete the entry.  
OR  
 or  to “View Later” and press  to select. You return to the Home screen.

## ☐ Storing an Alias or ID from the Missed Call List

### Procedure:

- 1  to access the menu.
- 2  or  to “Call Log” and press  to select.
- 3  or  to “Missed” and press  to select.
- 4  or  to the required missed call alias or ID and press  to select.
- 5  or  to “Store” and press  to select.
- 6 A blinking cursor appears. If needed, key in the alias for that ID and press .
- 7 The display shows “Contact Saved”.

*You can also store an ID without an alias.*

## ☐ Deleting a Call from a Call List

### Procedure:

- 1  to access the menu.
- 2  or  to “Call Log” and press  to select.
- 3  or  to the required list and press  to select.
- 4  or  to the required alias or ID and press  to select.
- 5  or  to “Delete Entry?” and press  to select.
- 6 Press  to select “Yes” to delete the entry. The display shows “Entry Deleted”.  
OR  
 or  to “No” to return to the previous screen.

*When you select a call list and it contains no entries, the display shows “List Empty”, and sounds a low tone if Keypad Tones are turned on (see **Turning Keypad Tones On or Off** on page 86).*

## ■ Call Alert Operation

Call Alert paging enables you to alert a specific radio user to call you back when they are able to do so.

This feature is applicable for subscriber aliases or IDs only and is accessible through the menu via Contacts or manual dial.

### 📄 Receiving and Responding to a Call Alert

When you receive a Call Alert page, you see “Call Alert” that alternates with the alias or ID of the calling radio on the display.

#### Procedure:

- 1 You hear a repetitive tone. The LED blinks yellow.
- 2 Press the **PTT** button within four (4) seconds of receiving a Call Alert page to respond to the Private Call.  
OR  
Press  to select “Ignore?” and to exit the Call Alert.

### 📄 Making a Call Alert from the Contacts List

#### Procedure:

- 1  to access the menu.
- 2  or  to “Contacts” and press  to select.
- 3  or  to the required subscriber alias or ID and press  to select.  
OR  
 or  to “Manual Dial” and press  to select.  
A blinking cursor appears. Enter the subscriber ID you want to page and press .
- 4  or  to “Call Alert” and press  to select.
- 5 The display shows “Call Alert: <Subscriber Alias or ID>”, indicating that the Call Alert has been sent.
- 6 The LED lights up solid green when your radio is sending the Call Alert.
- 7 If the Call Alert acknowledgement is received, a tone sounds and the display shows “Call Alert Successful”.  
OR  
If the Call Alert acknowledgement is not received, a tone sounds and the display shows “Call Alert Failed”.

## Making a Call Alert with the One Touch Access Button

### Procedure:

- 1 Press the programmed **One Touch Access** button to make a Call Alert to the predefined alias or ID.

---

- 2 The display shows “Call Alert: <Subscriber Alias or ID>”, indicating that the Call Alert has been sent.

---

- 3 The LED lights up solid green when your radio is sending the Call Alert.

---

- 4 If the Call Alert acknowledgement is received, a tone sounds and the display shows “Call Alert Successful”.  
OR  
If the Call Alert acknowledgement is not received, a tone sounds and the display shows “Call Alert Failed”.

---

## ■ Emergency Operation

---

An Emergency Alarm is used to indicate a critical situation. You are able to initiate an Emergency at any time on any screen display even when there is activity on the current channel.

Your dealer can set the duration of a button press for the programmed Emergency button, except for long press, which is similar with all other buttons:

- Short press – Between 0.05 seconds and 0.75 seconds
- Long press – Between 1.00 second and 3.75 seconds

The Emergency button is assigned with the Emergency On/Off feature. Check with your dealer for the assigned operation of the Emergency button.

*If short press the Emergency button is assigned to turn on the Emergency mode, then long press the Emergency button is assigned to exit the Emergency mode.*

If long press the Emergency button is assigned to turn on the Emergency mode, then short press the Emergency button is assigned to exit the Emergency mode.

Your radio supports three Emergency Alarms:

- Emergency Alarm
- Emergency Alarm with Call
- Emergency Alarm with Voice to Follow

In addition, each alarm has the following types:

- **Regular** – Radio transmits an alarm signal and shows audio and/or visual indicators.
- **Silent** – Radio transmits an alarm signal without any audio or visual indicators. Radio receives calls without any sound through the radio's speaker, until you press the **PTT** button to initiate the call.
- **Silent with Voice** – Radio transmits an alarm signal without any audio or visual indicators, but allow incoming calls to sound through the radio's speaker.

Only **ONE** of the Emergency Alarms above can be assigned to the programmed **Emergency** button.

## Receiving an Emergency Alarm

### Procedure:

- 1 When receiving an Emergency Alarm, the display shows the Emergency icon, the number of alarms received, and "Alarm Rcvd", which alternates with the alias or ID of the sender.
- 2 A tone sounds and the LED blinks red.
- 3 Your radio automatically acknowledges the Emergency Alarm (if enabled).

*When your radio receives an Emergency Alarm, it displays the Emergency Alarm received indications until acknowledgement is sent (if enabled) and you exit the Emergency mode.*

*You will not be able to receive any other indications or displays for any other calls until you exit the Emergency Alarm received screen.*

**NOTE:** Press , then press **Emergency Off** button immediately to clear the Emergency Alarm received indications and exit Emergency mode.

Press , then press **Emergency On** button immediately to toggle the Emergency feature between hidden or shown.

When your radio receives an Emergency Alarm, and you change the radio channel, the Emergency Alarm list is hidden.

The new channel displays the Emergency icon and the LED blinks red. When you change the radio channel back to the previous channel, it also displays the Emergency icon and the LED blinks red.

## Responding to an Emergency Alarm

### Procedure:

When receiving an Emergency Alarm:

- 1 Press any button to stop all Emergency Alarm received indications.

---

- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
  -  If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is now available for use.

---

- 3 Press **PTT** button to transmit non-emergency voice to the same group that the Emergency Alarm was targeted to. The LED lights up solid

green. Your radio remains in the Emergency mode.

- 4 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
  - OR
  -  Wait for the PTT Sidetone to finish (if enabled) and speak clearly into the microphone.

---

- 5 Release the **PTT** button to listen. When the emergency initiating radio responds, the LED blinks green. You see the Group Call icon, the group ID, and transmitting radio ID on your display.

---

- 6 Once your call ends, press , then press **Emergency Off** button immediately to clear the Emergency Call received indications and exit Emergency mode.

---

- 7 The radio returns to the Home screen.

*Emergency voice can only be transmitted by the emergency initiating radio. All other radios (including the emergency receiving radio) transmit non-emergency voice.*

## Sending an Emergency Alarm

This feature allows you to send an Emergency Alarm, a non-voice signal, which triggers an alert indication on a group of radios.

### Procedure:

- 1 Press the programmed **Emergency On** button.
- 2 The display shows “Sending Alarm”, which alternates with your radio ID. The LED lights up solid green and the Emergency icon appears on the Home screen display.
- 3 When an Emergency Alarm acknowledgment is received, the Emergency tone sounds and the LED blinks green. The display shows “Emergency Alarm Successful”.  
OR  
If your radio does not receive an Emergency Alarm acknowledgment, and after all retries have been exhausted, a tone sounds and the display shows “Emergency Alarm Failed”.
- 4 Radio exits the Emergency Alarm mode and returns to the Home screen.

*If your radio is set to Silent, it will not display any audio or visual indicators during Emergency mode.*

## Sending an Emergency Alarm with Call

This feature allows you to send an Emergency Alarm to a group of radios. Upon acknowledgement by a radio within the group, the group of radios can communicate over a programmed Emergency channel.

### Procedure:

- 1 Press the programmed **Emergency On** button.
- 2 The display shows “Sending Alarm”, which alternates with your radio ID. The LED lights up solid green and the Emergency icon appears on the Home screen display.
- 3 When an Emergency Alarm acknowledgment is received, the Emergency tone sounds and the LED blinks green. The display shows “Emergency Alarm Successful”.
- 4 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
- 5 Press **PTT** button to make the call. The LED lights up solid green and the group icon appears on the display.
- 6 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.  
OR  
 Wait for the PTT Sidetone to finish (if enabled) and speak clearly into the microphone.

- 7 Release the **PTT** button to listen.

---

- 8 When the channel is free for you to respond, a short alert tone sounds (🔊 if the Channel Free Indication feature is enabled). Press the **PTT**-button to respond.  
OR  
Once your call ends, press **Emergency Off** button to exit the Emergency mode.

---

- 9 The radio returns to the Home screen.

*If your radio is set to Silent, it will not display any audio or visual indicators during Emergency mode, or allow any received calls to sound through the radio's speaker, until you press the **PTT** button to initiate the call.*

*If your radio is set to Silent with Voice, it will not display any audio or visual indicators during Emergency mode, but allow incoming calls to sound through the radio's speaker. The indicators will only appear once you press the **PTT** button to initiate, or respond to, the call.*

## 📄 Sending an Emergency Alarm with Voice to Follow 🗣️

This feature allows you to send an Emergency Alarm to a group of radios. Your radio's microphone is automatically activated, allowing you to communicate with the group of radios without pressing the **PTT** button.

This activated microphone state is also known as "hot mic".

If you press the **PTT** button during the programmed hot mic transmission period, the radio ignores the PTT press and remains in Emergency mode.

**NOTE:** If you press the **PTT** button during hot mic, and continue to press it after the hot mic duration expires, the radio continues to transmit until you release the **PTT** button.

### Procedure:

- 1 Press the programmed **Emergency On** button.
- 2 The display shows Sending Alarm. The LED lights up solid green and the Emergency icon is displayed.

- 3 Once the display shows Emergency Alarm Successful, speak clearly into the microphone. When hot mic has been enabled, the radio automatically transmits without a PTT press until the hot mic duration expires.

---

- 4 While transmitting, the LED lights up solid green and the Emergency icon appears on the display.

---

- 5 Once the hot mic duration expires, the radio automatically stops transmitting. To transmit again, press the **PTT** button.

---

*If your radio is set to Silent, it will not display any audio or visual indicators during Emergency mode, or allow any received calls to sound through the radio's speaker, until the programmed hot mic transmission period is over, and you press the **PTT** button.*

*If your radio is set to Silent with Voice, it will not display any audio or visual indicators during Emergency mode when you are making the call with hot mic, but allow sound through the radio's speaker when the target radio responds after the programmed hot mic transmission period is over. The indicators will only appear when you press the **PTT** button.*

**NOTE:** If the Emergency Alarm request fails, the radio does not retry to send the request, and enters the hot mic state directly.

### Reinitiating an Emergency Mode

**NOTE:** This feature is only applicable to the radio sending the Emergency Alarm.

There are two instances where this can happen:

- You change the channel while the radio is in Emergency mode. This exits the Emergency mode. If Emergency Alarm is enabled on this new channel, the radio reinitiates Emergency.
- You press the programmed Emergency On button during an Emergency initiation/transmission state. This causes the radio to exit this state, and to reinitiate Emergency.

## Exiting Emergency Mode

**NOTE:** This feature is only applicable to the radio sending the Emergency Alarm.

Your radio exits Emergency mode when one of the following occurs:

- Emergency Alarm acknowledgement is received (for Emergency Alarm only), OR
- All retries to send the alarm have been exhausted, OR
- The Emergency Off button is pressed.

**NOTE:** If your radio is powered off, it exits the Emergency mode. The radio will not reinitiate the Emergency mode automatically when it is turned on again.

## ■ Text Message Features

Your radio is able to receive a text message from another radio or an e-mail application.

The **maximum** length of characters for a text message, including the subject line (seen when receiving message from an e-mail application), is **138**.

The radio exits the current screen once the inactivity timer expires. Any text message in the writing/editing screen will automatically be saved to the Drafts folder.

**NOTE:** Long press  at any time to return to the Home screen.

## Writing and Sending a Text Message

### Procedure:

Press the programmed Text Message button and proceed to Step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2  or  to "Message" and press  to select.
- 3  or  to "Write" and press  to select.
- 4 A blinking cursor appears.

Use the keypad to type your message.

Press  to move one space to the left.

Press  or the  key to move one space to the right.

Press the  key to delete any unwanted characters.

---

5 Press  once message is composed.

---

6  or  to “Send” and press  to send the message.

OR

 or  to “Save” and press  to save the message to the Drafts folder.

OR

 to edit the message.

 again to delete the message or save it to the Drafts folder.

---

7  or  to the required alias or ID and press  to select.

OR

 or  to “Manual Dial” and press  to select.

Key in the subscriber ID and press .

---

8 The display shows “Text Message: <Subscriber/ Group Alias or ID>”, confirming your message is being sent.

---

9 If the message is sent, a tone sounds and the

display shows “Message Sent”.

OR

If the message is not sent, a low tone sounds and the display shows “Message Send Failed”.

*If the text message fails to send, the radio returns you to the “Resend” option screen (see **Managing Fail-to-Send Text Messages** on page 74).*

### Sending a Quick Text Message

Your radio supports a maximum of ten (10) Quick Text messages as programmed by your dealer.

While Quick Text messages are predefined, you can edit each message before sending it.

#### **Procedure:**

Press the programmed Text Message button and proceed to Step 3.

OR

Follow the procedure below.

---

1  to access the menu.

---

2  or  to “Message” and press  to select.

---

3  or  to “Quick Text” and press  to select.

---

4  or  to the required Quick Text and press  to select.

---

5 A blinking cursor appears.

Use the keypad to edit the message, if required.

Press  to move one space to the left.

Press  or the  key to move one space to the right.

Press the  key to delete any unwanted characters.

6 Press  once message is composed.

7  or  to “Send” and press  to send the message.

OR

 or  to “Save” and press  to save the message to the Drafts folder.

OR

[BACK] to edit the message.

[BACK] again to delete the message or save it to the Drafts folder.

8  or  to the required alias or ID and press  to select.

OR

 or  to “Manual Dial” and press  to select.

Key in the subscriber alias or ID and press .

9 The display shows “Text Message: <Subscriber/ Group Alias or ID>”, confirming your message is being sent.

10 If the message is sent successfully, a tone sounds and the display shows Message Sent.

OR

If the message cannot be sent, a low tone sounds the display shows Message Send Failed.

*If the text message fails to send, the radio returns you to the “Resend” option screen (see **Managing Fail-to-Send Text Messages** on page 74).*

## **Sending a Quick Text Message with the One Touch Access Button**

### **Procedure:**

1 Press the programmed **One Touch Access** button to send a predefined Quick Text message to a predefined alias or ID.

2 The display shows “Text Message: <Subscriber/ Group Alias or ID>”, confirming your message is being sent.

3 If the message is sent successfully, a tone sounds and the display shows “Message Sent”.

OR

If the message cannot be sent, the display shows “Message Send Failed”.

*If the text message fails to send, the radio returns you to the “Resend” option screen (see **Managing Fail-to-Send Text Messages** on page 74).*

### **Accessing the Drafts Folder**

You can save a text message to send it at a later time.

If a **PTT** button press or a mode change causes the radio to exit the text message writing/editing screen while you are in the process of writing or editing a text message, your current text message is automatically saved to the Drafts folder.

The most recent saved text message is always added to the top of the Drafts list.

The Drafts folder stores a maximum of ten (10) last saved messages. When the folder is full, the next saved text message automatically replaces the oldest text message in the folder.

**NOTE:** Long press  at any time to return to the Home screen.

### **Viewing a Saved Text Message**

#### **Procedure:**

Press the programmed Text Message button and proceed to Step 3.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to “Message” and press  to select.

---

- 3  or  to “Drafts” and press  to select.

---

- 4  or  to the required message and press  to select.

### **Editing and Sending a Saved Text Message**

#### **Procedure:**

- 1 Press  again while viewing the message.

---

- 2  or  to Edit and press  to select.  
A blinking cursor appears.  
Use the keypad to edit your message.  
Press  to move one space to the left.  
Press  or the  key to move one space to the right.  
Press the  key to delete any unwanted characters.  
Press  once message is composed.

---

- OR

---

- 2  or  to Send and press  to select.

---

- 3  or  to the required alias or ID and press  to select.

OR

 or  to Manual Dial and press  to select. Key in the subscriber alias or ID and press .

- 4 The display shows “Sending to: <Subscriber/ Group Alias or ID>”, confirming your message is being sent.
- 5 If the message is sent, a tone sounds and the display shows Message Sent.

OR

If the message is not sent, a low tone sounds and the display shows Message Send Failed.

*If the text message fails to send, it is moved to the Sent Items folder and marked with a Send Failed icon.*

### **Deleting a Saved Text Message from Drafts**

#### **Procedure:**

Press the programmed Text Message button and proceed to Step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2  or  to “Messages” and press  to select.
- 3  or  to “Drafts” and press  to select.

- 4  or  to the required message and press  to select.
- 5  or  to “Delete” and press  to delete the text message.

### **Managing Fail-to-Send Text Messages**

You can select one of the following options while at the Resend option screen:

- Resend
- Forward
- Edit

**NOTE:** If the channel type (i.e. conventional digital) is not a match, you can only edit and forward a Fail-to-Send message.

### **Resending a Text Message**

#### **Procedure:**

- 1 Press  to resend the same message to the same subscriber/group alias or ID.
- 2 If the message is sent successfully, a tone sounds and the display shows “Message Sent”.  
OR  
If the message cannot be sent, the display shows “Message Send Failed”.

### **Forwarding a Text Message**

Select Forward to send the message to another subscriber/group alias or ID.

#### **Procedure:**

- 1  or  to “Forward” and press  to select.
- 2  or  to the required alias or ID and press  to select.  
OR  
 or  to “Manual Dial” and press  to select.  
Key in the subscriber ID and press .
- 3 The display shows “Text Message: <Subscriber/Group Alias or ID>”, confirming your message is being sent.
- 4 If the message is sent, a tone sounds and the display shows “Message Sent”.  
OR  
If the message is not sent, a low tone sounds and the display shows “Message Send Failed”.

### **Editing a Text Message**

Select Edit to edit the message before sending it.

**NOTE:** If a subject line is present (for messages received from an e-mail application), you cannot edit it.

#### **Procedure:**

- 1  or  to “Edit” and press  to select.
- 2 A blinking cursor appears beside the message. Use the keypad to edit your message. Press  to move one space to the left. Press  or the  key to move one space to the right. Press the  key to delete any unwanted characters.
- 3 Press  once message is composed.
- 4  or  to “Send” and press  to send the message.  
OR  
 or  to “Save” and press  to save the message to the Drafts folder.  
OR  
 to edit the message.  
 again to delete the message or save it to the Drafts folder.
- 5  or  to the required alias or ID and press  to select.  
OR  
 or  to “Manual Dial” and press  to select.  
Key in the subscriber ID and press .
- 6 The display shows “Text Message: <Subscriber/Group Alias or ID>”, confirming your message is being sent.

7 If the message is sent, a tone sounds and the display shows “Message Sent”.

OR

If the message is not sent, a low tone sounds and the display shows “Message Send Failed”.

## **Managing Sent Text Messages**

Once a message is sent to another radio, it is saved in Sent Items. The most recent sent text message is always added to the top of the Sent Items list.

The Sent Items folder is capable of storing a maximum of thirty (30) last sent messages. When the folder is full, the next sent text message automatically replaces the oldest text message in the folder.

**NOTE:** Long press  at any time to return to the Home screen.

## **Viewing a Sent Text Message**

**Procedure:**

Press the programmed Text Message button and proceed to Step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2  or  to “Messages” and press  to select.

3  or  to “Sent Items” and press  to select.

4  or  to the required message and press  to select.

A subject line may be shown if the message is from an e-mail application.

*The icon at the top right corner of the screen indicates the status of the message (see **Sent Item Icons** on page 35).*

## **Sending a Sent Text Message**

You can select one of the following options while viewing a sent text message:

- Resend
- Forward
- Edit
- Delete

**NOTE:** If the channel type (i.e. conventional digital) is not a match, you can only edit, forward, or delete a Sent message.

**Procedure:**

- 1 Press  again while viewing the message.
- 2  or  to “Resend” and press  to select.
- 3 The display shows “Sending to: <Subscriber/ Group Alias or ID>”, confirming that the same message is being sent to the same target radio.

- 4 If the message is sent, a tone sounds and the display shows “Message Sent”.

OR

If the message is not sent, a low tone sounds and the display shows “Message Send Failed”.

*If the message fails to send, the radio returns you to the “Resend” option screen. Press  to resend the message to the same subscriber/group alias or ID.*

**NOTE:** Changing the volume, and pressing any button, except for , , or , returns you to the message.

The radio exits the “Resend” option screen if you press the **PTT** button to initiate a Private or Group Call, or to respond to a Group Call. The radio also exits the screen when it receives a text or telemetry message, an emergency call or alarm, or a call alert.

The display returns to the “Resend” option screen if you press the **PTT** button to respond to a Private Call (except when the radio is displaying the Missed Call screen), and at the end of an All Call.

Press  or  to access the “Forward”, “Edit”, or “Delete” option screen:

- Select “Forward” to send the selected text message to another subscriber/group alias or ID (see **Forwarding a Text Message** on page 75).
- Select “Edit” to edit the selected text message before sending it (see **Editing a Text Message** on page 75).
- Select “Delete” to delete the text message.

**NOTE:** If you exit the message sending screen while the message is being sent, the radio updates the status of the message in the Sent Items folder without providing any indication in the display or via sound.

If the radio changes mode or powers down before the status of the message in Sent Items is updated, the radio cannot complete any In-Progress messages and automatically marks it with a Send Failed icon.

The radio supports a maximum of five (5) In-Progress messages at one time. During this period, the radio cannot send any new message and automatically marks it with a Send Failed icon.

## ☰ **Deleting All Sent Text Messages from Sent Items**

### **Procedure:**

Press the programmed **Text Message** button and proceed to

Step 3.

OR

Follow the procedure below.

- 1  to access the menu.

---

  - 2  or  to “Messages” and press  to select.

---

  - 3  or  to “Sent Items” and press  to select.

---

  - 4  or  to “Delete All” and press  to select.

---

  - 5 At “Delete Message?”, press  to select “Yes”.  
The display shows “Sent Items Cleared”.
- OR
- At “Delete Message?”,  or  to “No” and press  to return to the previous screen.

*When you select Sent Items and it contains no text messages, the display shows “List Empty”, and sounds a low tone if Keypad Tones are turned on (see **Turning Keypad Tones On or Off** on page 86).*

## ☰ **Receiving a Text Message**

When your radio receives a message, the display shows the alias or ID of the sender and the message icon at the far left of the screen.

You can select one of the following options when receiving a text message:

- Read?
- Read Later
- Delete

**NOTE:** The radio exits the Text Message alert screen and sets up a Private or Group Call if the **PTT** button is pressed when the radio is displaying the alert screen.

## ☰ **Reading a Text Message**

### **Procedure:**

- 1  or  to “Read?” and press  to select.

---

  - 2 Selected message in the Inbox opens.  
A subject line may be shown if the message is from an e-mail application.

---

  - 3 Press  to return to the Inbox.
- OR
- Press  to reply, forward, or delete the text message.

Press  or  to access the “Read Later” or “Delete” option screen:

- Select “Read Later” to return to the screen you were on prior to receiving the text message.
- Select “Delete” to delete the text message.

### **Managing Received Text Messages**

Use the Inbox to manage your text messages. The Inbox is capable of storing a maximum of 30 messages.

Your radio supports the following options for text messages:

- Reply
- Forward
- Delete
- Delete All

**NOTE:** If the channel type (i.e. conventional digital) is not a match, you can only forward, delete, or delete all Received messages.

Text messages in the Inbox are sorted according to the most recently received.

**NOTE:** Long press  at any time to return to the Home screen.

### **Viewing a Text Message from the Inbox**

#### **Procedure:**

- 1  to access the menu.
- 2  or  to “Messages” and press  to select.
- 3  or  to “Inbox” and press  to select.
- 4  or  to view the messages.

A subject line may be shown if the message is from an e-mail application.

- 5 Press  to select the current message, and press  again to reply, forward, or delete that message.

OR

Long press  to return to the Home screen.

*Unread messages are indicated with an exclamation mark (!).*

### **Replying to a Text Message from the Inbox**

#### **Procedure:**

Press the programmed Text Message button and proceed to Step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2  or  to “Messages” and press  to select.
- 3  or  to “Inbox” and press  to select.

- 4  or  to the required message and press  to select.

A subject line may be shown if the message is from an e-mail application.

- 5 Press  once more to access the sub-menu.

- 6  or  to "Reply" and press  to select.

- 7  or  to "Write" and press  to select.

A blinking cursor appears. Use the keypad to write your message.

OR

 or  to "Quick Text" and press  to select.

A blinking cursor appears. Use the keypad to edit your message, if required.

- 8 Press  once message is composed.

- 9 The display shows "Text Message: <Subscriber/Group Alias or ID>", confirming your message is being sent.

- 10 If the message is sent successfully, a tone sounds and the display shows "Message Sent".

OR

If the message cannot be sent, the display shows "Message Send Failed".

*If the message fails to send, the radio returns you to the "Resend" option screen (see **Managing Fail-to-Send Text Messages** on page 74).*

## **Deleting a Text Message from the Inbox**

### **Procedure:**

Press the programmed **Text Message** button and proceed to Step 3.

OR

Follow the procedure below.

- 1  to access the menu.

- 2  or  to "Messages" and press  to select.

- 3  or  to "Inbox" and press  to select.

- 4  or  to the required message and press  to select.

A subject line may be shown if the message is from an e-mail application.

- 5 Press  once more to access the sub-menu.

- 6  or  to "Delete" and press  to select.

- 7 At "Delete Message?",  or  to "Yes" and press  to select.

- 8 The display shows "Message Deleted".

- 9 The screen returns to the Inbox.

## **Deleting All Text Messages from the Inbox**

### **Procedure:**

Press the programmed **Text Message** button and proceed to Step 3.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to “Messages” and press  to select.

---

- 3  or  to “Inbox” and press  to select.

---

- 4  or  to “Delete All” and press  to select.

---

- 5 At “Delete Message?”,  or  to “Yes” and press  to select.

---

- 6 The display shows “Inbox Cleared”.

*When you select the Inbox and it contains no text messages, the display shows “List Empty”, and sounds a low tone if Keypad Tones are turned on (see **Turning Keypad Tones On or Off** on page 86).*

## **Privacy**

If enabled, this feature helps to prevent eavesdropping by unauthorized users on a channel by the use of a software based scrambling solution. The signaling and user identification portions of a transmission are not scrambled.

Your radio must have privacy enabled on the channel to send a privacy-enabled transmission, although this is not a necessary requirement for receiving a transmission. While on a privacy enabled channel, the radio is still able to receive clear (unscrambled) transmissions.

To unscramble a privacy-enabled call, your radio must be programmed to have the same Privacy Key the transmitting radio.

If your radio receives a scrambled call that is of a different Privacy Key, you will hear a garbled transmission.

The LED lights up solid green while the radio is transmitting and blinks green rapidly when the radio is receiving an ongoing privacy-enabled transmission.

## Procedure:

Press the programmed **Privacy** button to toggle privacy on or off.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to Radio Settings and press  to select.

---

- 4  or  to “Privacy” and press  to select.

---

- 5 The display shows “Privacy” and “Turn On”. Press  to enable privacy. The display shows the secure icon and “Privacy On”.  
OR  
The display shows “Privacy” and “Turn Off”. Press  to disable privacy. The display shows the unsecure icon and “Privacy Off”.

*If the radio has a privacy type assigned, the Home screen shows the secure or unsecure icon, except when the radio is sending or receiving an Emergency call or alarm.*

## ■ Dual Tone Multi Frequency (DTMF)

The Dual Tone Multi Frequency (DTMF) feature allows the radio to operate in a radio system with an interface to telephone systems.

### Procedure:

To initiate a DTMF call.

- 1 Press and hold the **PTT** button.

---

- 2 Enter the desired number.

*You can turn off the DTMF tone by disabling all radio tones and alerts (see **Turning the Radio Tones/Alerts On or Off** on page 89).*

## ■ Security

You can enable or disable any radio in the system. For example, you might want to disable a stolen radio, to prevent the thief from using it, and enable that radio, when it is recovered.

**NOTE:** Performing Radio Disable and Enable is limited to radios with these functions enabled. Check with your dealer or system administrator for more information.

### Radio Disable

#### Procedure:

Use the programmed **Radio Disable** button.

- 1 Press the programmed **Radio Disable** button.
- 2  or  to the required alias or ID and press  to select.
- 3 The display shows “Radio Disable: <Subscriber Alias or ID>” and the LED lights up solid green.
- 4 Wait for acknowledgment.
- 5 If successful, a tone sounds and the display shows “Radio Disable Successful”.

OR

If not successful, a tone sounds and the display shows “Radio Disable Failed”.

OR

#### Procedure:

Use the menu.

- 1  to access the menu.
- 2  or  to “Contacts” and press  to select. The entries are alphabetically sorted.
- 3  or  to the required alias or ID and press  to select.  
OR  
 or  to “Manual Dial” and press  to select.  
Key in the subscriber alias or ID and press .
- 4  or  to “Radio Disable” and press  to select. The LED blinks green.
- 5 The display shows “Radio Disable: <Subscriber Alias or ID>” and the LED lights up solid green.
- 6 Wait for acknowledgment.
- 7 If successful, a tone sounds and the display shows “Radio Disable Successful”.  
OR  
If not successful, a tone sounds and the display shows “Radio Disable Failed”.

*Do not press  during the Radio Disable operation as you will not get an acknowledgement message.*

## Radio Enable

### Procedure:

Use the programmed **Radio Enable** button.

- 1 Press the programmed **Radio Enable** button.
- 2  or  to the required alias or ID and press  to select.
- 3 The display shows “Radio Enable: <Subscriber Alias or ID>” and the LED lights up solid green.
- 4 Wait for acknowledgment.
- 5 If successful, a tone sounds and the display shows “Radio Enable Successful”.

OR

If not successful, a tone sounds and the display shows “Radio Enable Failed”.

OR

### Procedure:

Use the menu.

- 1  to access the menu.
- 2  or  to “Contacts” and press  to select. The entries are alphabetically sorted.
- 3  or  to the required alias or ID and press  to select.

OR

-  or  to “Manual Dial” and press  to select. Key in the subscriber alias or ID and press .
- 4  or  to “Radio Enable” and press  to select. The LED blinks green.
- 5 The display shows “Radio Enable: <Subscriber Alias or ID>” and the LED lights up solid green.
- 6 Wait for acknowledgment.
- 7 If successful, a tone sounds and the display shows “Radio Enable Successful”.

OR

If not successful, a tone sounds and the display shows “Radio Enable Failed”.

*Do not press  during the Radio Enable operation as you will not get an acknowledgement message.*

## ■ Lone Worker

This feature prompts an emergency to be raised if there is no user activity, such as any radio button press or activation of the channel selector, for a predefined time.

Following no user activity for a programmed duration, the radio pre-warns the user via an audio indicator once the inactivity timer expires.

If there is still no acknowledgment by the user before the predefined reminder timer expires, the radio initiates an Emergency Alarm.

Only one of the following Emergency Alarms is assigned to this feature:

- Emergency Alarm
- Emergency Alarm with Call
- Emergency Alarm with Voice to Follow 

The radio remains in the emergency state allowing voice messages to proceed until action is taken. See **Emergency Operation** on page 64 on ways to exit Emergency.

**NOTE:** This feature is limited to radios with this function enabled. Check with your dealer or system administrator for more information.

## ■ Utilities

### Locking and Unlocking the Keypad

You can lock your radio's keypad to avoid inadvertent key entry.

#### Procedure:

- 1  to access the menu.
- 2  or  to "Utilities" and press  to select.
- 3  or  to "Radio Settings" and press  to select.
- 4  or  to "Keypad Lock" and press  to select.
- 5 The display shows "Keypad Locked" and returns to the Home screen.
- 6 To unlock the keypad, press  followed by .
- 7 The display shows "Keypad Unlocked" and returns to the Home screen.

## ☰ Turning Keypad Tones On or Off

You can enable and disable keypad tones if needed.

### Procedure:

- 1  to access the menu.

---

- 2  or  to "Utilities" and press  to select.

---

- 3  or  to "Radio Settings" and press  to select.

---

- 4  or  to "Tones/Alerts" and press  to select.

---

- 5  or  to "Keypad Tones" and press  to select.

---

- 6 The display shows "Turn On". Press  to enable keypad tones. The display shows "Keypad Tone On".  
OR  
The display shows "Turn Off". Press  to disable keypad tones. The display shows "Keypad Tone Off".

---

## ☰ Setting the Squelch Level

You can adjust your radio's squelch level to filter out unwanted calls with low signal strength or channels that have a higher than normal background noise.

**Settings:** "Normal" is the default. Tight filters out (unwanted) calls and/or background noise. However, calls from remote locations may also be filtered out.

### Procedure:

Press the programmed **Squelch** button to toggle squelch level between normal and tight.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to "Utilities" and press  to select.

---

- 3  or  to "Radio Settings" and press  to select.

---

- 4  or  to "Squelch" and press  to select.

---

- 5 Choose either "Tight" or "Normal" and press  to select.

---

- 6 Screen returns to the previous menu.

---

### **Setting the Power Level**

You can customize your radio's power setting to high or low for each channel.

**Settings:** “High” enables communication with radios located at a considerable distance from you. Low enables communication with radios in closer proximity.

#### **Procedure:**

Press the programmed **Power Level** button to toggle transmit power level between high and low.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Settings” and press  to select.

---

- 4  or  to “Power” and press  to select.

---

- 5 Change your current setting as prompted on the display.

---

- 6 Press  to select a new power level.

---

- 7 Screen returns to the previous menu.

Long press  to return to the Home screen. The power level icon is visible.

### **Turning the Voice Operating Transmission (VOX) Feature On or Off**

This feature allows you to initiate a hands-free voice activated call on a programmed channel. The radio automatically transmits, for a programmed period, whenever the microphone on the VOX-capable accessory detects voice.

Pressing the **PTT** button during radio operation will disable VOX. To re-enable VOX, do one of the following:

- Turn the radio off and power it on again, OR
- Change the channel via the Channel Selector Knob, OR
- Follow the procedure below.

**NOTE:** Turning this feature on or off is limited to radios with this function enabled. Check with your dealer or system administrator for more information.

#### **Procedure:**

Press the programmed **VOX** button to toggle the feature on or off.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

- 3  or  to “Radio Settings” and press  to select.

---

- 4  or  to “VOX” and press  to select.

---

- 5 The display shows “VOX On”. Press  to disable VOX. A tone sounds and the display shows “VOX Off”.  
OR  
The display shows “VOX Off”. Press  to enable VOX. A tone sounds and the display shows “VOX On”.

---

*If the Talk Permit Tone feature is enabled (see **Turning the Talk Permit Tone On or Off** on page 78), use a trigger word to initiate the call. Wait for the Talk Permit Tone to finish before speaking clearly into the microphone.*

## Controlling the Display Backlight

You can enable or disable the radio’s display backlight as needed. The setting also affects the Menu Navigation Buttons and keypad backlighting accordingly.

### Procedure:

Press the programmed **Backlight** button to toggle the backlight settings.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Settings” and press  to select.

---

- 4  or  to “Backlight” and press  to select.

---

- 5 The display shows “Auto On”. Press  to enable the display backlight. The display shows “Backlight Auto On”.  
OR  
The display shows “Turn Off”. Press  to disable the display backlight. The display shows “Backlight Turn Off”.

---

*The display backlight and keypad backlighting are automatically turned off if the LED indicator is disabled (see **Turning the LED Indicator On or Off** on page 90).*

### Turning the Radio Tones/Alerts On or Off

You can enable and disable all radio tones and alerts (except for the incoming Emergency alert tone) if needed.

#### Procedure:

Press the programmed **All Tones/Alerts** button to toggle all tones on or off.

OR

Follow the procedure below.

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Settings” and press  to select.

---

- 4  or  to “Tones/Alerts” and press  to select.

---

- 5  or  to “All Tones” and press  to select.

---

- 6 The display shows “Turn On”. Press  to enable all tones and alerts. The display shows “All Tones On”.

OR

The display shows “Turn Off”. Press  to disable all tones and alerts. The display shows “All Tones Off”.

---

### Setting the Tone Alert Volume Offset Level

You can adjust the Tone Alert Volume Offset level if needed.

This feature adjusts the volume of the tones/alerts, allowing it to be higher or lower than the voice volume.

#### Procedure:

- 1  to access the menu.

---

  - 2  or  to “Utilities” and press  to select.

---

  - 3  or  to “Radio Settings” and press  to select.

---

  - 4  or  to “Tones/Alerts” and press  to select.

---

  - 5  or  to “Vol. Offset” and press  to select.

---

  - 6  or  to the required volume value. The radio sounds a feedback tone with each corresponding volume value.

---

  - 7 Press  to keep the required displayed volume value. The display shows “Volume Offset Selected”.
- OR
- Repeat Step 6 to select another volume value.
- OR
-  to exit without changing the current volume offset settings.
-

## ☰ Turning the Talk Permit Tone On or Off

You can enable and disable the Talk Permit Tone if needed.

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Settings” and press  to select.

---

- 4  or  to “Tones/Alerts” and press  to select.

---

- 5  or  to “Talk Permit” and press  to select.

---

- 6 The display shows “Turn On”. Press  to enable the Talk Permit Tone. The display shows “Talk Permit Tone On”.  
OR  
The display shows “Turn Off”. Press  to disable the Talk Permit Tone. The display shows “Talk Permit Tone Off”.

---

## ☰ Turning the LED Indicator On or Off

You can enable and disable the LED Indicator if needed.

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Settings” and press  to select.

---

- 4  or  to “LED Indicator” and press  to select.

---

- 5 The display shows “Turn On”. Press  to enable the LED Indicator. The display shows “All LEDs On”.  
OR  
The display shows “Turn Off”. Press  to disable the LED Indicator. The display shows “All LEDs Off”.

---

*The display backlight, buttons, and keypad backlighting are automatically turned off if the LED indicator is disabled (see **Controlling the Display Backlight** on page 88).*

## ☐ Turning the Introduction Screen On or Off

You can enable and disable the Introduction Screen if needed.

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Settings” and press  to select.

---

- 4  or  to “Intro Screen” and press  to select.

---

- 5 The display shows “Turn On”. Press  to enable the Introduction Screen. The display shows “Intro Screen On”.

OR

The display shows “Turn Off”. Press  to disable the Introduction Screen. The display shows “Intro Screen Off”.

---

## ☐ Accessing General Radio Information

Your radio contains information on the following:

- Battery
- Radio ID 
- Software Version
- Codeplug Version

**NOTE:** Press  at any time to return to the previous screen or long press  to return to the Home screen.

## ☐ Accessing the Battery Information

Displays information on your radio battery.

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Info” and press  to select.

---

- 4  or  to “Battery Info” and press  to select.

---

- 5 The display shows the battery information.

---

## **Checking the Radio ID**

Displays the ID of your radio.

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Info” and press  to select.

---

- 4  or  to “My Number” and press  to select.

---

- 5 The display shows the radio ID.

## **Checking the Firmware Version**

Displays the Firmware version on your radio.

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Info” and press  to select.

---

- 4  or  to “Firmware Ver.” and press  to select.

---

- 5 The display shows the current firmware version.

## **Checking the Codeplug Version**

Displays the codeplug version on your radio.

### Procedure:

- 1  to access the menu.

---

- 2  or  to “Utilities” and press  to select.

---

- 3  or  to “Radio Info” and press  to select.

---

- 4  or  to “CP Ver.” and press  to select.

---

- 5 The display shows the current codeplug version.

## Accessories

---

Your radio is compatible with the accessories listed in this chapter. Contact your dealer for details.

### ■ Antennas

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- VHF Wideband, 136 – 174 MHz, Double Helical Antenna, White (ATV-15C)
- UHF, 403 – 470 MHz, Whip Antenna, Black(ATU-14A)
- UHF, 450 – 527 MHz, Whip Antenna, Brown (ATU-14D)

### ■ Battery

---

- Ni-MH, 1300 mAh Submersible (IP57) Battery (FNB-V116)
- Li-Ion, 2200 mAh Submersible (IP57) Battery (FNB-V117LI)

### ■ Chargers

---

- Multi-Unit Charger (VAC-6030)
- Single-Unit Charger (VAC-40)

### ■ Carry Devices

---

- Belt Clip for 2.5-Inch Belt Width (CLIP-21)
- Nylon Carry Case with 3-Inch Fixed Belt Loop for Display Radio (CSC-96)

### ■ Speaker Microphone

---

- Speaker Microphone (MH-66A7A)

### ■ Programming Cable

---

- Programming Cable for Portable (CT-155)

Vertex Standard warrants, to the original purchaser only, its Vertex Standard manufactured communications products against defects in materials and workmanship under normal use and service for a given period of time from the date of purchase.

Limited Warranty Details:

- North America customers (USA and Canada): <http://www.vertexstandard.com/lmr/warranty-terms.aspx>
- Customers outside of North America: contact the authorized dealer in your country.

Part 15.21: Changes or modifications to this device not expressly approved by Vertex Standard  
could void the user's authorization to operate this device.



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